INEEL Intelligence

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A high-level monthly briefing on operations and activities at the Department of Energy's Idaho National Engineering and Environmental Laboratory – Home of Science and Engineering Solutions. Work at the lab supports the Department's business lines of environmental quality, energy resources, national security and science.

■ ENVIRONMENTAL QUALITY – Britain Turns to Idaho for Answers

Officials from the United Kingdom Atomic Energy Authority (UKAEA) have returned to the INEEL to see first-hand the technologies Idaho's national laboratory uses to decontaminate nuclear facilities and remediate sites slated for cleanup. The UKAEA's Dounreay nuclear facility in Northern Scotland, once the center for fast reactor research, is now engaged in a major decommissioning and site remediation effort that is expected to cost $12 billion over the next 50 to 60 years. Because of the enormity of these challenges, INEEL technical assistance is being sought concerning spent nuclear fuel, criticality analysis, long-range planning, stewardship, and non-destructive evaluation. This working partnership began after a collaborative agreement was signed between the UKAEA and the INEEL in December 2000. The agreement remains in effect through December 2005.

■ NATIONAL SECURITY – INEEL Provides Bioterrorism Response Training

Microbiologist and INEEL scientific fellow Frank Roberto conducted a bioterrorism workshop for members of the Idaho State Police Commercial Vehicle Safety and Hazardous Materials Division on May 14. Roberto presented the range of probable biological agents, scenarios of possible deployment, and the first responder's role and actions in a venue that included lecture and exercises. Roberto is responsible for molecular biology research at the INEEL and supports the state with bioterrorism information and testing in response to the nation's anthrax attacks. The officers receive thousands of hours of hazardous materials training, however, Idaho State Police officials are concerned that a potential terrorist-type incident could involve biological agents and they want ensure officers are as up to date as possible on identification and response.

■ ENERGY RESOURCES – Building a New Use for Crop Waste

Researchers at the U.S. Department of Energy's Idaho National Engineering and Environmental Laboratory are partnering with universities and industry to make critical advancements in the fields of agriculture-based bioenergy and bioproducts. The team is working to use the renewable materials from wheat and other crops to provide many of the basic chemical building blocks to produce fuels and a wide range of consumer goods normally produced from petrochemicals. Of regional importance, the INEEL is working to develop selective straw stem harvesting, bioprocessing and chemical separation technologies for converting wheat straw into fuels and chemicals.

■ SCIENCE – INEEL Scientist Lauded as Young Innovator

INEEL staff scientist Daniel Branagan has been chosen as one of the world's 100 Top Young Innovators by MIT's Magazine of Innovation, *Technology Review*. The TR100 award winners are young individuals whose innovative work in business and technology has a profound impact on today's world. Nominees are recognized for their contribution in transforming the nature of technology in industries such as biotechnology, computing, energy, medicine, manufacturing, nanotechnology, telecommunications and transportation. Branagan has been recognized for his advancements in materials science. His most recent success is a new class of metallic coating called Super Hard Steel that can be sprayed onto a wide variety of surfaces as a tough, low-cost, wear- and corrosion-resistant coating.

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